

DECLASSIFIED BY ORIGINATING AGENCY

line 21, delete "in"; after "above" insert
--cell--; and after "below" insert --cell C--.
Page 7, line 1, change "(C2 - C3)" to --C2 - C3--;
line 2, change "determined. (In" to
--determined (S11). In--; after "4" insert --,-- (comma);
line 3, change "criterion)" to --criterion--;
line 4, after "calculated" insert --(S12),--;
line 6, after "in" insert --cells--; and after
"calculated" insert --(S13)--;
line 8, after "filtering" insert --,-- (comma);
after "output" insert --(S14)--; and
line 13, after "measured" insert --,-- (comma).

IN THE CLAIMS:

Please amend the following claims:

1. (Amended) A continuous wave ranging system, comprising an r.f. generator for generating an r.f. carrier wave, a modulator for modulating said r.f. carrier wave in accordance with a pseudo-random code, a transmitting antenna for radiating a modulated signal from said modulator towards a target, a receiving antenna and receiver for detecting a signal reflected back from said target, a correlator for correlating said signal reflected back from said target with said pseudo

DECLASSIFIED BY ORIGINATING AGENCY

1
random code, which incorporates a selected phase shift corresponding to a current range gate to be tested, and processing means for processing range/amplitude data from said correlator to discriminate between reflections due to said target and those due to other objects adjacent to said target at shorter ranges, and to produce respective range output signals corresponding to said target and said other objects.

2. (Amended) A system as claimed in claim 1, wherein said processing means determines a first threshold [is determined] with regard to an amplitude of received signals such that signals immediately above this first threshold are signals returned from said other objects.

~~Claim 3~~, line 1, after "wherein" insert --said processing means sets--; and

~~line 2~~, delete "is set".

~~Claim 5~~, line 1, after "wherein" insert --said processing means makes--; and

~~line 2~~, delete "is made".

2
6. (Amended) A system as claimed in claim 3, wherein said processing means makes a scan [is made] of pairs of signals above and below a range of maximum returned signal strength until one of said pairs includes a signal below said second threshold, calculates the total energy of said pairs

2
air
DECLASSIFIED BY ORIGINATING AGENCY

above said first threshold [is calculated], and determines the range of a fixed fraction of said total energy [determined] as the range of said target.

[Please add the following new claims:]

--7. A system as claimed in claim 5 wherein said processing means calculates the energy in the shortest range cell whose amplitude exceeds said first threshold and in the immediately preceding range cell, and via interpolation calculates the range at which the energy in the shortest range cell and in the preceding range cell crosses said first threshold as the range of a said other object.

8. A system as define in claim 6 wherein: said target is the ground and said other objects are features on the ground; said first and second thresholds are fixed values below the maximum received amplitude in a range cell of a plurality of range cells, and are above the ground noise level of the received signals; and said second threshold is at least as great as said first threshold.

9. A system as claimed in claim 1 further comprising: means for detecting the amplitude of the output signals from said correlator in the respective range gates; a memory array for storing the output signals of said amplitude detecting